

2. PLANNING

To ensure the collection of usable data it is necessary to formulate the objectives of the project. The development of appropriate objectives was accomplished through the Data Quality Objective (DQO) process. The results of this process are presented in the following sections of this plan.

2.1 CHARACTERIZATION OBJECTIVES

The Reconnaissance Level Characterization objectives are based on the questions presented in Section 7.0 of the DOE Decommissioning Handbook (DOE/EM-0142P).

This plan was developed to specify the data collection requirements necessary to provide a baseline of information for use during decommissioning activities. The information obtained by implementing this plan will be compiled into the Reconnaissance Level Characterization. Ultimately, the data may be used to determine the risks to the environment and personnel during these activities. (dismantling, decommissioning, etc.).

The following questions and answers were used to develop the sampling requirements for this project.

What is the end use of the facility or structure?

Due to the change in mission of the Rocky Flats Environmental Technology Site (RFETS) from the production of nuclear components to environmental cleanup and shutdown, the 123 Complex and its associated facilities have no identified mission after Fiscal Year 1997. It has, therefore, been determined by site management that B123 should be decommissioned to a safe and stable configuration to reduce operating costs and hazards

What types of chemical, physical/biological, or radiological hazard is being evaluated?

The media sampling that will be required will include all types of building materials and environmental samples as necessary. The following analytical parameters will be reviewed. Sampling requirements will be based on process knowledge and information gathered during the historical assessment presented in Section 3.

- Asbestos
- PCBs
- Excess Chemicals
- Lead
- Beryllium
- Radioactive materials

What level of worker protection is required to perform characterization in the facility, structure or environs?

The level of worker protection will be based on the data collected during the Reconnaissance Level Characterization. The following issues will be evaluated.

Administrative Controls (i.e., limit time in area)
Engineering Controls (i.e., containment requirements)
Personal Protective Equipment (i.e., respirator requirements)

What type of instrumentation is required?

The instrumentation required is specified in Appendix 6.1 and 6.2.

Has all facility structural data been reviewed?

This data was reviewed during the historical assessment presented in Section 3.

Have all suspect materials been identified?

No. The purpose of the Reconnaissance Level Characterization is to identify suspect materials through sampling and analysis.

Are there any regulatory and statistical drivers for sampling frequency?

There are no regulatory or statistical drivers for sampling frequency corresponding to B123. Sampling frequency will be based on professional judgement and methods presented in the Characterization Instructions and Protocols (Appendix 6.1 and 6.2, respectively).

For this plan, the DQO process was used and the rationale for each step is outlined below.

Why perform this Reconnaissance Level Characterization?

The Reconnaissance Level Characterization will be performed to determine the hazards to workers during decommissioning activities.

What decisions will be made from this Reconnaissance Level Characterization?

The level of worker protection required for decommissioning activities will be determined based on the results of the Reconnaissance Level Characterization.

What information is required to make the decision?

The following information will be required to resolve the decision:

Historical Information
Media Sampling (as outlined in Table 3-1)

What is the scope of this Reconnaissance Level Characterization?

The methodology contained in this document applies to all buildings and areas associated with B123 including B113, B114 and B123S.

What is the basis for the decision?

Data collected during this project will be evaluated in accordance with all applicable regulatory requirements. If any of these requirements are not met, alternative actions (i.e., Personal Protective Equipment) may be necessary.

What are the limits on decision errors?

The error rates for the data collected during this study are incorporated into the detection limits for the analysis parameters. Therefore, it has been determined these limits are acceptable for the DQOs.

How will the survey design be optimized?

The data collection design will be optimized by utilizing Radiological Characterization Instructions (Appendix 6.1) and Decommissioning Characterization Protocols (Appendix 6.2) that have been developed for this project.

3. IMPLEMENTATION

This section provides information necessary to implement the requirements of the planning (DQO) task of this project.

3.1 HISTORICAL ASSESSMENT

A detailed examination of process knowledge and documents, relating to Building 123 was initiated in April 1997. As part of this examination, a comprehensive survey of historical records was undertaken to determine the location and character of any radioactive and hazardous contaminants which may be present in the area. The general conclusions drawn from this examination are as follows:

Presently, Building 123 is in a fully operational condition. All required utility services (i.e., electrical service, water supply, and natural gas supply) are active. Building air ventilation and High Efficiency Particulate Air (HEPA) filtered exhaust systems, instrument air supply compressors, and necessary radiological monitoring instrumentation systems are in normal continuous operation. All manually-actuated and automated fire/alarm suppression systems are operational. All installed facility security and radiological alarm systems are normal. All remote-handling mechanisms and auxiliary facility support equipment are operational or are available for activation and use.

Building 123 presently houses a small inventory of materials and equipment which are radioactive, radioactively-contaminated, and/or contain hazardous substances.

Equipment which was thought to contain hazardous substances were put in the Idle Equipment Program. This ensured the equipment fluids would be tested for the presence of hazardous substances. Equipment fluids found to contain a hazardous substance were removed during deactivation. Due to the age of the facility, considerable amounts of asbestos may be present in the insulation and building materials. Lead may be present in the vault shielding and in some of the building materials.

Although not all inclusive, the following list contains some of the hazardous materials which have